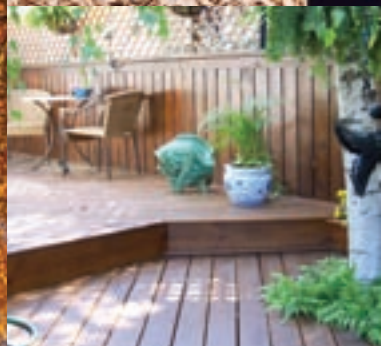


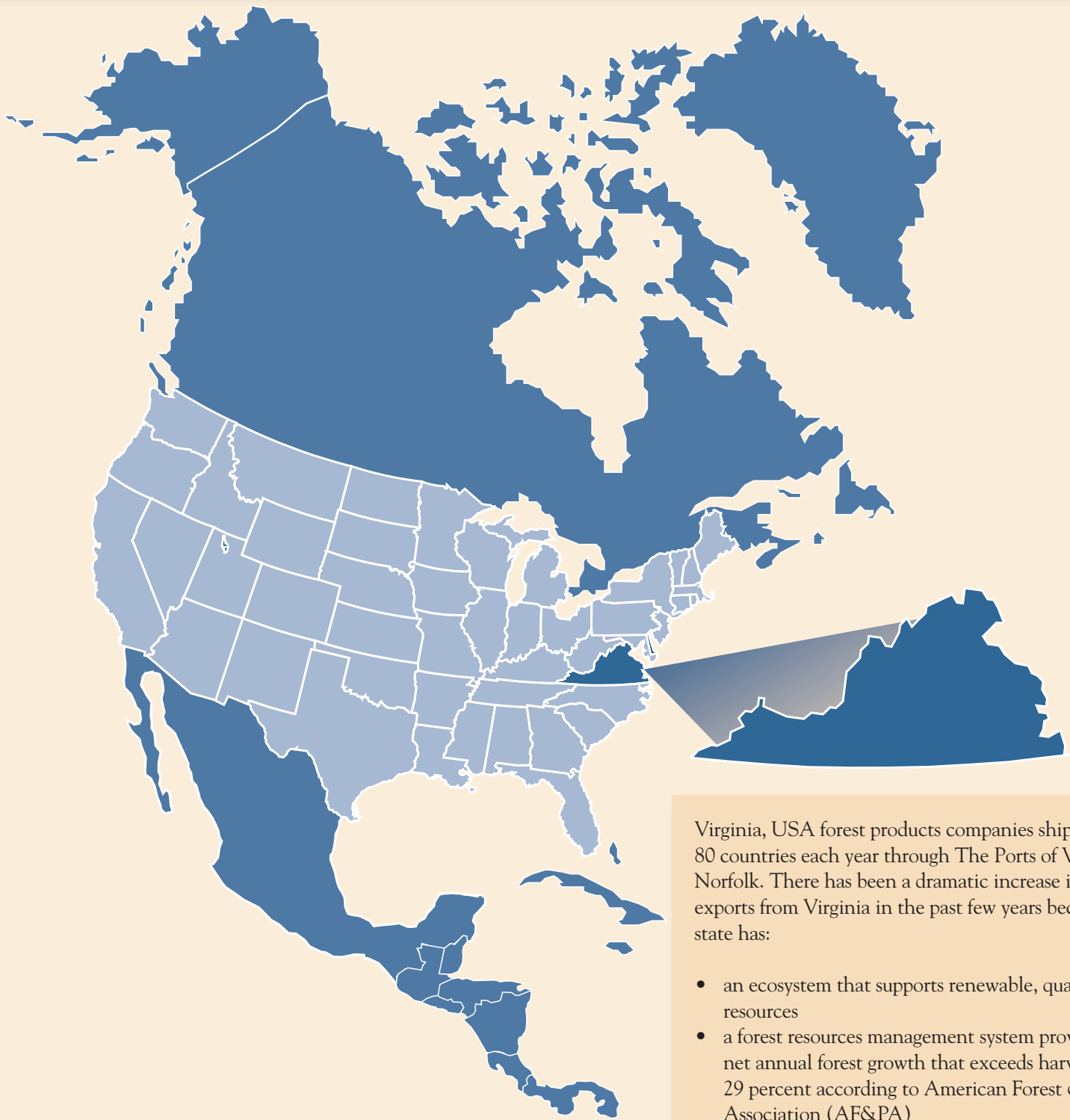
# VIRGINIA WOODS



## PRODUCTS Easy to Export



DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES  
OFFICE OF INTERNATIONAL MARKETING



## Virginia Forest Products are Exported Worldwide

Virginia, USA forest products companies ship to nearly 80 countries each year through The Ports of Virginia in Norfolk. There has been a dramatic increase in forestry exports from Virginia in the past few years because the state has:

- an ecosystem that supports renewable, quality forest resources
- a forest resources management system providing a net annual forest growth that exceeds harvest by 29 percent according to American Forest & Paper Association (AF&PA)
- a location on the east coast of America that lends itself well to international trade

The Virginia Department of Agriculture and Consumer Services, through its Office of International Marketing, is committed to developing global markets for the state's forest products and providing assistance for the international buyer.

This publication provides a brief introduction to Virginia forest products and the producers who will meet your export needs.



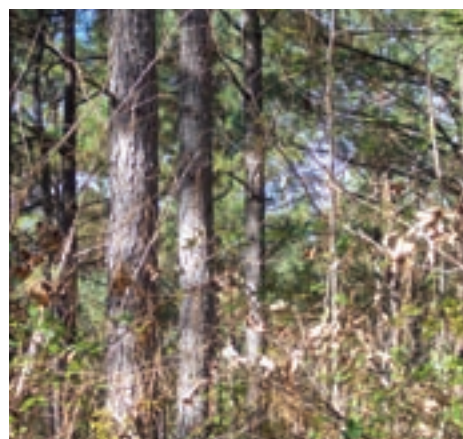
# Virginia's Commitment

As the industry has grown, so has its reputation as a world supplier of quality forest products.

- Virginia has been exporting forest products since the early 1600s.
- Ships from Jamestown, the first English colony in the New World, returned to Europe with wood products from the shores of Virginia.
- The forest products industry developed from the productive, pine-laden shores of the Coastal Plain to the stately hardwoods on the ridges and valleys of the Appalachian Mountains.

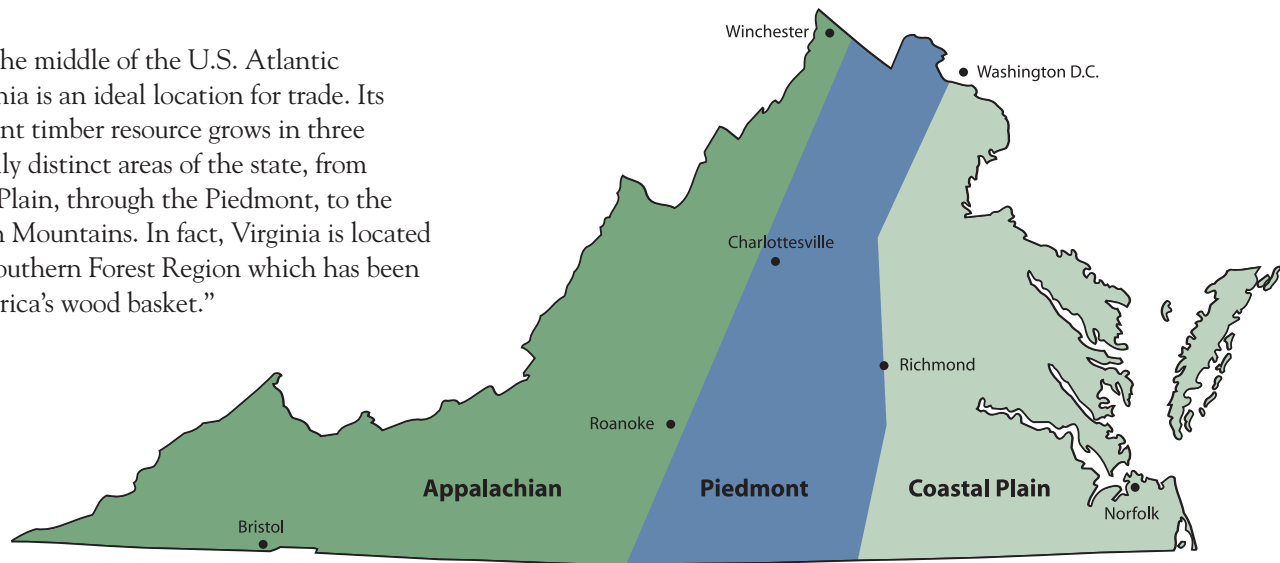
Today, Virginia's leaders remain committed to exporting quality forest products to the world.

- Virginia manufacturers and exporters are serving more markets than ever before, from the Americas to Europe, the Middle East, and the Pacific Rim of the Far East.
- White oak, red oak, tulipwood, hickory, white ash, walnut, cherry, southern pine, and other species of lumber, log, veneer and other wood products are supplied worldwide to exacting standards.
- Virginia's resource base, world-class industry, infrastructure, and export services combine to create an excellent source for your quality forest products needs.



# Preview Virginia's Forest Resource Base

Situated in the middle of the U.S. Atlantic Coast, Virginia is an ideal location for trade. Its vast, abundant timber resource grows in three geographically distinct areas of the state, from the Coastal Plain, through the Piedmont, to the Appalachian Mountains. In fact, Virginia is located in the US Southern Forest Region which has been called "America's wood basket."



## APPALACHIAN

This area of mountains and valleys has abundant rainfall, good soil, and moderate climate. Commercial timber species include northern red oak, white oak, tulipwood (yellow-poplar), white ash, hard maple, black walnut, cherry, hickory, and white pine.

## PIEDMONT

Lying east of the mountains, this area is rolling, gentle terrain most favorable for harvesting timber. Many stands are on abandoned farmlands long returned to productive forests. This land provides abundant annual harvests of red oaks, white oaks, tulipwood, soft maple, sap gum, hickory, and southern yellow pines.

## COASTAL PLAIN

Stretching from the Atlantic Ocean to the Piedmont area, the coastal plain is flat to gentle, rolling terrain. Rich soil supports a wide array of species including white oaks, red oaks, southern yellow pines, tulipwood, sap gum, hickory, cypress, soft maple, sycamore, and black walnut.

## VIRGINIA'S COMMERCIAL FOREST SPECIES GROW IN DIFFERENT GEOGRAPHIC AREAS

Virginia's Appalachian and Piedmont regions are within the broader Appalachian commercial zone, which produces hardwood species prized by international buyers. The Appalachian zone is generally known for slow growth and fine-textured woods.

The Coastal Plain region is within the southern commercial zone, where woods generally have a faster growth rate and a heavier texture.

However, distinct variations can exist in timber originating only a short distant apart. A buyer with a narrow range of specifications needs to be very familiar with the timber source.

A heterogenous natural mixed pine-hardwood stand transitions into a homogenous young pine plantation.



# Virginia's Timber Profile

- Climate and topography very favorable for harvesting
- Total commercial forest acreage 6.2 million hectares (61 percent of all land)
- Ownership
  - 77.6 percent privately owned
  - 12.4 percent publicly owned
  - 10.0 percent industry owned
- Virginia's forests offer a variety of timber types
  - Hardwood types make up 78% of the forest
  - Pine types represent the 22% balance
    - Plantation pines are on 55% of the pine acreage
    - Loblolly (*Pinus taeda*) is the main plantation tree
  - Tulipwood is the most abundant hardwood species
- Reforestation
  - More than 36,000 hectares of a variety of commercial species are being planted annually through combined state and private efforts (AF&PA)



Fraser Fir Christmas tree farm

Top: Hardwood log concentration yard Above: Cypress stand



# Virginia's Commercial Forest Species

*(Liriodendron tulipifera)*

Known locally as tulip-poplar or yellow-poplar, tulipwood is actually a member of the magnolia family. It is one of the most abundant species in Virginia and grows in all regions. The sapwood is white and usually thick; the heartwood is yellowish brown but can be streaked with purple, green, or black. Because of its white sapwood and excellent machining properties, tulipwood is gaining favor in many export markets. Tulipwood is used for furniture parts, molding, interior trim, siding, musical instruments, boxes and crates, and veneer corestock and backs. Tulipwood holds paint, enamel and stains exceptionally well. The wood has so many desirable characteristics that it is suitable for a wide variety of uses.

## TULIPWOOD, AMERICAN



*(Fraxinus americana and Fraxinus pennsylvanica)*

The wood is hard, very strong, tough, and elastic. The heartwood of commercial white ash is brown; the sapwood is light-colored or nearly white. A popular, easy-to-finish, furniture wood, ash is also an excellent wood for paneling, handles, bending stock, veneer and sporting goods. White ash lumber may be substituted for white oak in selected applications. It commonly grows on fertile, upland soils in Virginia.

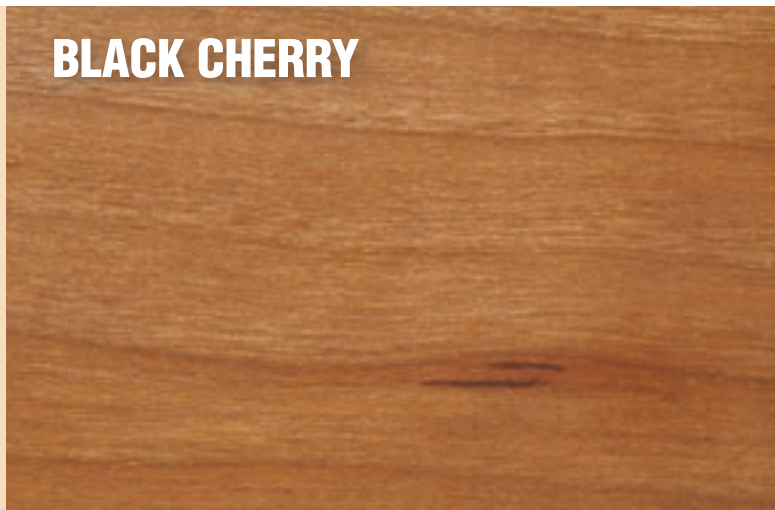
## ASH, WHITE



*(Prunus serotina)*

Best when grown in the high mountain regions of the state, black cherry wood is reddish brown with yellowish sapwood, moderately heavy, hard, strong, fine-grained, and unsurpassed in its finishing qualities. Cherry is excellent for furniture, fine veneer, woodwork, cabinets and wooden ware novelties. Cherry usually sells at a premium price because the wood is well-liked by furniture makers and quantities are limited.

## BLACK CHERRY



Virginia Tulipwood lumber delivered in Milan, Italy.



Photographs can only illustrate examples of woods, and the following are representative of the most abundant commercial species. A complete listing of each exporter's species is available through the Virginia Department of Agriculture and Consumer Services. The Department also has specific information about the working properties, physical properties and supplies of the different species.



## WALNUT, BLACK

(*Juglans nigra*)

A classic American hardwood, black walnut finishes beautifully with an impressive grain pattern and color. The color varies from a rich chocolate brown to a dark purplish brown. The outstanding uses of black walnut are for furniture, architectural woodwork, and decorative panels. Other important uses are gunstocks, cabinets, and interior finishes.



## HICKORY

(*Carya spp.*)

Four commercial species of hickory are distributed throughout the state: red hickory (*C. ovalis*); pignut hickory (*C. glabra*); shagbark hickory (*C. ovata*); and mockernut hickory (*C. tomentosa*). The wood is very heavy, very hard, stiff, and strong; the color is white to cream with tan heartwood. It has very high resistance to shock and is therefore a favored wood for tool handles. Other uses are furniture, paneling, flooring, charcoal, and specialties. Hickory has become quite popular in kitchen cabinets and flooring.



## MAPLE, SOFT

(*Acer rubrum* and *Acer saccharinum*)

Red maple and silver maple are distributed throughout Virginia, although red maple is more abundant and thus one of the most widely distributed species in the state. A favorite of American furniture makers, soft maple is creamy to light brown. Although softer than hard maple, it is still a very hard wood and offers great resistance to abrasion. Other uses include flooring, paneling, interior finishing, cabinets, and novelties.



# Virginia's Commercial Forest Species

The Virginia Department of Forestry supports a tree nursery system that supplies reforestation efforts across the state. Pine seedlings are produced from genetically improved seed sources.



*(Liquidambar styraciflua)*

## SAP GUM

Many overseas buyers know this species as sap gum, although it is locally known as sweet gum or red gum. This wood is heavy, moderately hard, close-grained, and not very strong. It is not durable when exposed to weather. Sap gum is used for flooring, wall paneling, cabinets, interior finishes, paper pulp and veneers for baskets. Veneers of the heartwood are used for furniture, sometimes in imitation of walnut, cherry, or mahogany.



*(Pinus spp.)*

## PINE, SOUTHERN YELLOW (SYP)

Of the four commercial woods comprising the southern yellow pines (SYP), two are widely distributed in Virginia: loblolly pine (*P. taeda*) and shortleaf pine (*P. echinata*). The southern yellow pines are classed as heavy, strong, stiff, hard, and moderately high in shock resistance. The sapwood is yellowish white and the heartwood is reddish brown. In the U.S. the SYPs are devoted mostly to structural use, including decking and construction, and for posts, poles, pilings, and pulpwood. However, certain export markets utilize the wood for decorative interior finishing, paneling, flooring, and furniture.



*(Pinus strobus)*

## PINE, EASTERN WHITE

Abundant in the western mountain regions of Virginia, eastern white pine is light in weight, moderately soft, moderately low in strength, and low in resistance to shock. The wood is easy to work, and the color varies from light cream sapwood to light brown heartwood, often with a reddish tinge. Uses are furniture, knotty paneling, interior trim, coffins, doors, novelties and log homes.





## CYPRESS, SOUTHERN

(*Taxodium distichum*)

Southern cypress, known by many as bald cypress, is moderately heavy, moderately strong, and moderately hard, and the heartwood is very resistant to decay. An extremely durable wood, cypress is used for siding, exterior trim, paneling, porches, wood decks, and other types of construction. The color ranges from light, yellowish brown to dark, brownish red. Southern cypress grows in the lowlands of the coastal areas of Virginia.

## OAK, WHITE

(*Quercus*, spp.)

White oaks have been used for furniture and interior finishes as far back as the Greek and Roman eras. In Virginia, four species predominate: white oak (*Q. alba*); post oak (*Q. stellata*); swamp chestnut oak (*Q. michauxii*); and chestnut oak (*Q. prinus*). The color of white oak varies from a light brown to a light brown with a grayish cast in the heartwood. White oaks are used for architectural interiors, paneling, furniture, flooring, tight cooperage (wine barrels), millwork, crossties, pallets, and veneer.

## OAK, RED

(*Quercus*, spp.)

In Virginia, five commercial species of red oaks are widely distributed: northern red oak (*Q. rubra*); black oak (*Q. velutina*); southern red oak (*Q. falcata*); scarlet oak (*Q. coccinea*); and pin oak (*Q. palustris*). Red oak is favored for furniture, interior finish, paneling, flooring, pallets, crossties, and millwork. The wood is heavy, hard, stiff, and has a high resistance to shock. The color varies from a light brown to a light brown with a reddish cast.

## OTHER SPECIES

There are a number of other trees found in Virginia that may be in demand and can be made available if market conditions warrant. These include:

Red Spruce (*Picea rubens*)  
Hemlock (*Tsuga canadensis*)  
Northern White Cedar (*Thuja occidentalis*)  
White Cedar (*Chamaecyparis thyoides*)  
Red Cedar (*Juniperus virginiana*)

Black Willow (*Salix nigra*)  
Cottonwood (*Populus deltoides*)  
River Birch (*Betula nigra*)  
Yellow Birch (*Betula alleghaniensis*)  
Sweet Birch (*Betula lenta*)  
Ironwood (*Ostrya virginiana*)  
Hornbeam (*Carpinus caroliniana*)  
Beech (*Fagus grandifolia*)  
Elm (*Ulmus* spp.)  
Hackberry (*Celtis occidentalis*)  
Cucumber Tree (*Magnolia acuminata*)

Sassafras (*Sassafras albidum*)  
Sycamore (*Platanus occidentalis*)  
Black Locust (*Robinia pseudoacacia*)  
Sugar Maple (*Acer saccharum*)  
Basswood (*Tilia species*)  
Black Gum (*Nyssa sylvatica*)  
Persimmon (*Diospyros virginiana*)  
Royal Paulownia (*Paulownia tomentosa*)

# Virginia's Forest Inventory

## Hardwoods and Softwoods make up Virginia's Forest Inventory

Volume of Sawtimber on Timberland (percentage by species)

### Hardwoods

White Oak	20%
Red Oak	17%
Tulipwood	17%
Hickory	4%
Maple	5%
Beech	2%
Sap gum	3%
Blackgum	1%
Ash	1%
Basswood	1%
Black Locust	1%
Other Eastern Hardwoods (Walnut, Cherry, Sycamore, Hackberry, etc.)	4%

---

TOTAL 75%

### Softwoods

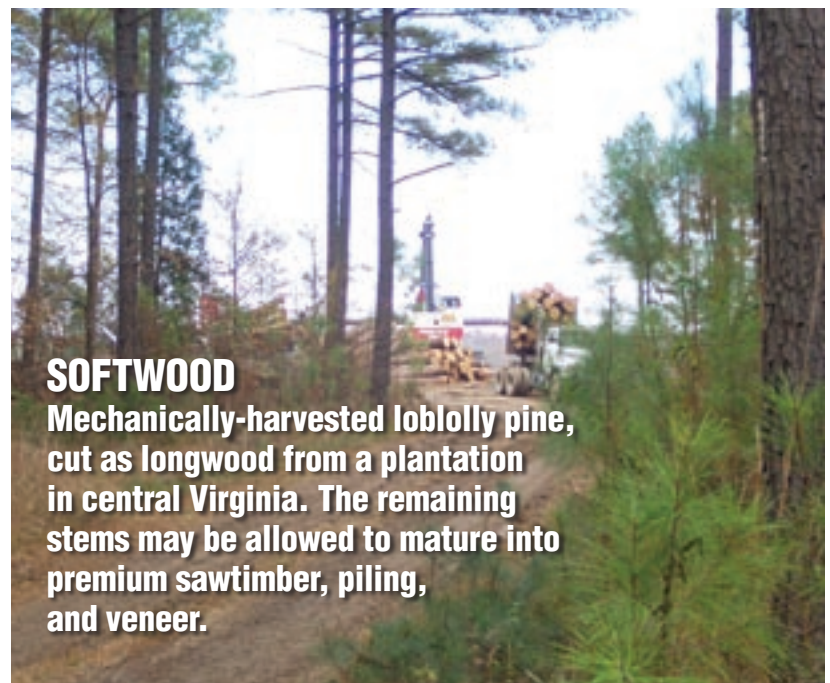
Yellow Pines	20%
Eastern White Pine	3%
Eastern Hemlock	1%
Spruce, Fir, Cypress, Cedar	1%

---

TOTAL 25%



Source: U.S. Forest Service, USDA





# Virginia Forest Products Industry is Big Business

## Economic Contributions

The forest products industry in Virginia is a very important part of the state's economy, contributing over \$11.5 billion annually.

## Employment

An estimated 220,000 people are employed in the primary and secondary manufacturing, harvesting, transportation and marketing of forest products. This represents 6.6% of the state's non-farm workforce.

## Industry Profile

The industry is very diverse and capital-intensive. A variety of activities make up the forest products industry, ranging from bark processors to large, vertically-integrated paper products manufacturers.

Several trends have emerged within the industry in the last decade: consolidation of manufacturing activities; increased production; introduction of new product lines; and creation of new market opportunities. Many of the companies are small to medium-sized operations.

Virginia's world-class forest products industry is positioned to provide quality products for global markets. Every market, whether domestic or export, receives the same commitment to quality and dependability.

## Manufacturing Facilities

Wood-based manufacturing industries are an important part of Virginia's industrial establishment and represent over 27% of its production. According to the Virginia Department of Forestry, Virginia has the following manufacturing facilities:

Sawmills	285
Furniture Plants	198
Paper Products Finishing Plants	116
Pallet Plants	60
Millwork Plants	60
Treating Plants	27
Veneer & Plywood Plants	12
Particle Board Plants	12
Pulp & Paper Mills	7

## Annual Production

According to the American Forest & Paper Association, wood-based products companies in Virginia produce annually:

Hardwood Lumber	855 million board feet
Softwood Lumber	728 million board feet
Structural Panels	1,187 million square feet
Paper	1,708 short tons
Paperboard	3,907 short tons



Many forest products companies in Virginia are family-owned and operated, some with multiple generations of experienced people dedicated to producing quality wood products.

# Virginia is Accessible and Export Ready

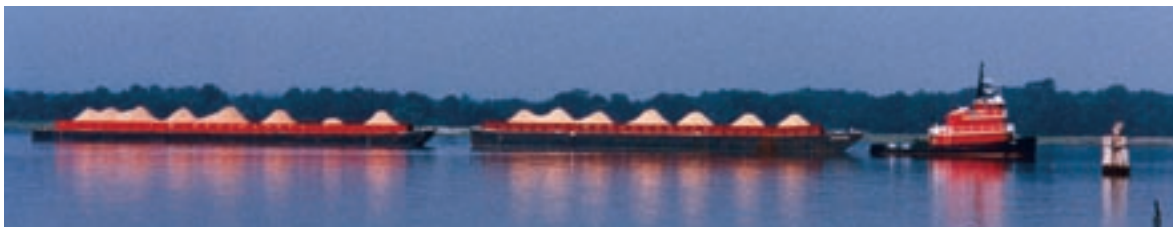
Virginia's forest products exporters maintain their excellent service through an extensive transportation network which is among the best in the United States. Ideally situated in the middle of the Atlantic seaboard, the state boasts the deepest natural harbor on the east coast. In addition, its modern shipping facilities and year-round, ice-free conditions make Virginia ideally suited to international trade. Located immediately south of the U.S. capitol of Washington, D.C., Virginia possesses ample rail lines and an extensive network of interstate highways.

## HIGHWAYS

- Third largest state-maintained system in the U.S.
- Over 105,000 kilometers of highways and streets cover the state
- Six major interstate routes crisscross the state with 1800 kilometers of four-to-ten lane highways
- A statewide arterial network of four lane highways

## RAILROADS

- Eleven railroads operate on nearly 5,500 kilometers of railway, serving forest products exporting companies
- One of the nation's largest railroads is headquartered in Norfolk, Virginia
- Railroads participate with ocean container lines to provide unified door-to-door rates
- Several private spur lines provide special service to forest products businesses
- The Virginia Inland Port offers one-day rail service to ocean service port
- The Port of Richmond receives forest products via rail





## AIR

- 14 commercial airports serve Virginia
- 62 general aviation airports are found statewide; 20 can serve jet aircraft
- Dulles International and Ronald Reagan Washington National Airports provide long-range, inter-continental flights

## PORTS

- The Port of Virginia (Hampton Roads) offers 5,400 sailings annually to over 250 ports in 100 countries
- The five terminals comprising Hampton Roads have the deepest natural harbor on the east coast
- The river ports of Alexandria, Hopewell, and Richmond complement Hampton Roads
- Richmond Deepwater Terminal, convenient to central Virginia, offers accommodations for forest products
- The Virginia Inland Port at Front Royal offers customized services to forest products shippers from the east coast

The Virginia Forest Products Association (VFPA) is a non-profit, non-governmental, privately supported association of individuals, firms, and corporations having an interest in the Commonwealth's lumber and wood products industry.



Virginia white oak stave logs being unloaded in Spain by a cooperage supplier to the European wine making industry.



Logs being loaded at Port of Richmond.



# Virginia Forest Products Exports



Virginia forest products exports include: hardwood and softwood; saw logs; veneer logs; softwood lumber; hardwood lumber; veneers; hardwood flooring; hardwood furniture dimension, molding and other millwork; laminated lumber; preservative-treated lumber; plywood; furniture; pulp; specialty papers; newsprint; and paperboard. Wood chips, pulpwood, and fuel wood are also available.

An analysis of hardwood log and lumber shipments (products with the highest volume of exports) to overseas markets during a recent period illustrates the diversity of markets and species exported.

- Forest products exports through Virginia ports earn nearly \$500 million yearly and are shipped to 95 countries
- Forest products shippers are very experienced in the intricacies of trade
- Forest products shippers know their markets
- Forest products shippers give export markets the highest attention to quality and long-term commitment

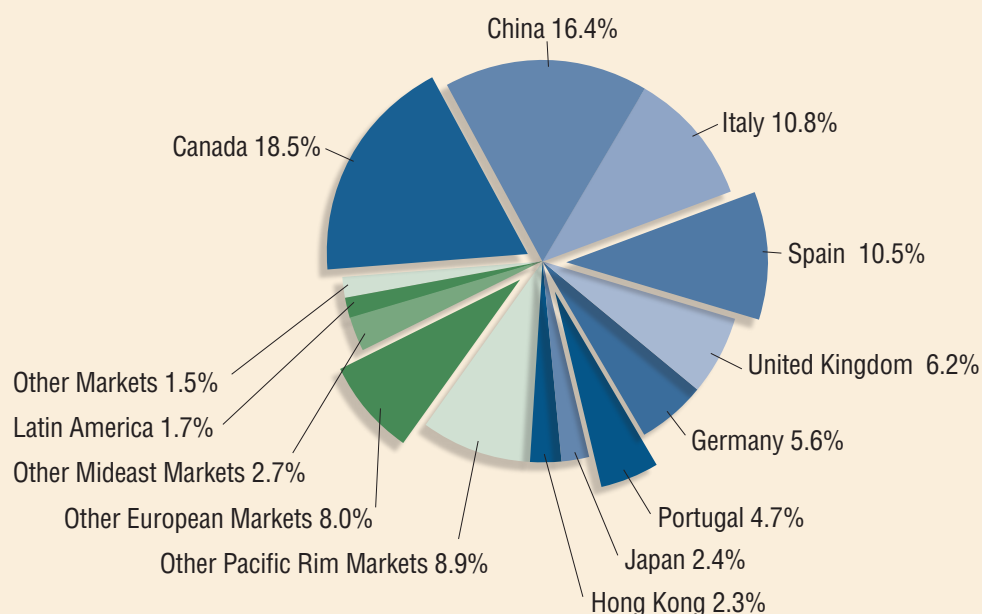
The forest products export industry continues to be a strong part of Virginia's economy. In 2005, Virginia companies exported nearly \$219 million worth of wood products. Exports were shipped to 78 different countries.





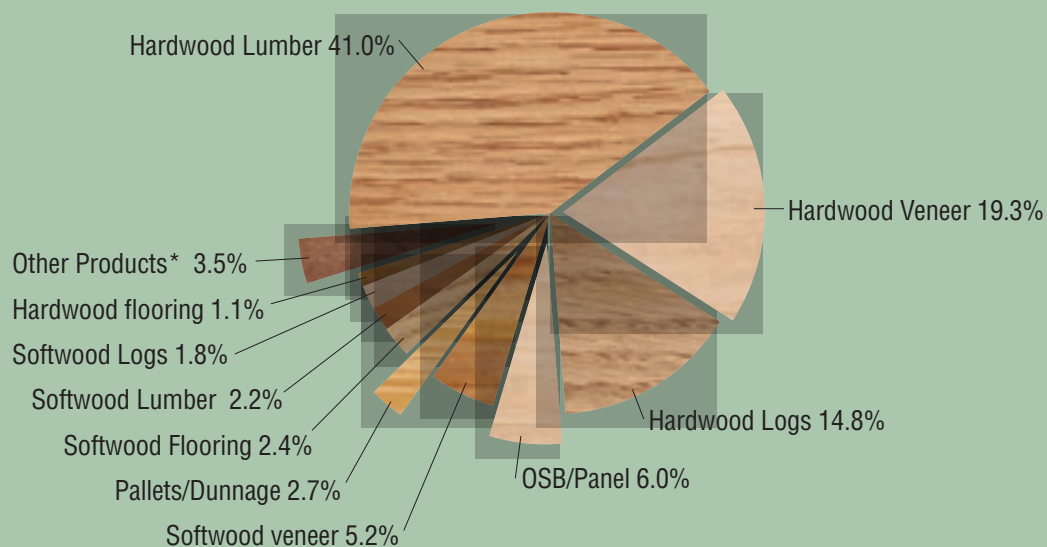
# Export Markets

## Primary and Secondary Wood Products Shipped by Virginia Companies



## Forest Products Exports Shipped by Virginia Companies

(Listed by percentage of value by GTIS; not including pulp and paper)

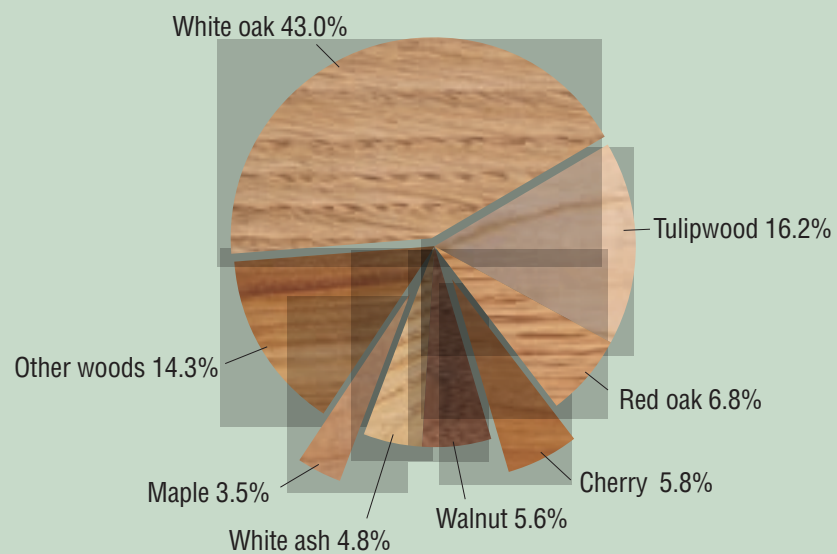


\* includes: poles, piles, posts; wood chips; siding; molding; joinery; treated lumber; railroad ties; softwood plywood; hardwood plywood

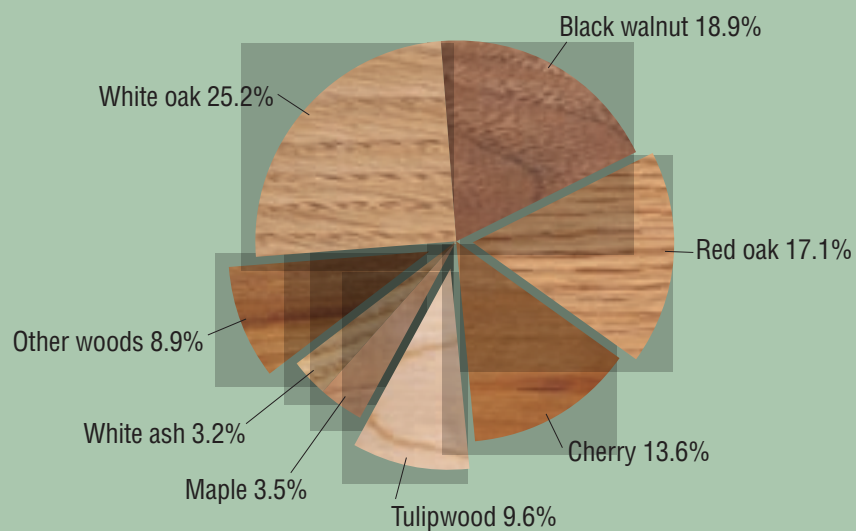
Export figures are in terms of F.A.S. (free alongside) values and are based on information provided by the USDA, U.S. Forest Service and/or the Global Trade Information Service (GTIS) for exports of primary and secondary wood products.

# Hardwood Species Shipped

## Hardwood Species Shipped Through Norfolk District Ports in 2005 Hardwood Lumber



## Hardwood Logs





# Virginia Forest Lands are Healthy

Leaders of Virginia's forest sector have long realized that wise use of the forest resources does not just happen. It takes planning and dedication on behalf of all involved in the wood business. The Christmas tree producer, the recreational use provider, the private landowner, and the pulp and paper company executive – all work to ensure a continuation of Virginia's forest resources.

More than four decades ago, Virginia passed legislation that helped to ensure regeneration of its forests. Later, incentive programs were adopted to further encourage reforestation. Today, these and other positive actions have resulted in a renewable forest base, thanks to the state's Department of Forestry (VDOF), land grant universities, forest industry representatives, and landowners. According to the most recent forest survey conducted by VDOF, net annual growth of the state's commercial forest lands was 3.3% between 1992 and 2001. This exceeded the 2.4% annual cut by just under one percent. In the past 60 years, the total net volume of sawtimber on forest lands in the state has more than tripled, until it now stands at 87.5 billion board feet (or 206.4 million cubic meters).

Every tree harvested in Virginia annually is replaced with several vigorous young seedlings. As a result, more wood is grown in Virginia than is harvested or lost to disease, insects or fire. Because forest products are such an important part of the state's economy, every effort is made to ensure that Virginia forests continue to be productive. Forest management is intended to provide not only for wood and other related products, but also for important environmental benefits, ranging from windbreaks, shade, and soil stabilization to aesthetics, wildlife habitat, and improved air and water quality.



The American Tree Farm System® The sign of good forestry! The Virginia Tree Farm Program is one of numerous ways the Virginia Forestry Association (VFA) promotes stewardship and wise use of the Commonwealth's forest resources for the economic and environmental benefits of all Virginians.



VFA membership consists of forest landowners, forest product businesses, forestry professionals, and a variety of individuals and groups who are concerned about the future and well being of Virginia's forest resources.

# Virginia Export Services

The Office of International Marketing of the Virginia Department of Agriculture and Consumer Services (VDACS) provides a vital link between Virginia's forest products producers, shippers, agents, importers, and end users. The forest products marketing specialist based in Richmond, Virginia works with trade experts in the VDACS office in Hong Kong and consultants in Europe and Latin America to offer a wide variety of services:

## Developing markets and locating customers

- Conducting product/market studies
- Contacting international buyers through trade missions
- Promoting products at trade shows, fairs and other sales development activities
- Arranging Virginia exporter overseas trips to meet with international buyers
- Accompanying foreign buyers to visit Virginia exporters

## Expediting trade lead inquiries

- Acting as a clearinghouse for qualifying the exporting opportunities listed by the Foreign Agricultural Service of the United States Department of Agriculture
- Forwarding importer/exporter inquiries and conducting follow-up activities to help consummate sales
- Working with producer associations to communicate production and marketing opportunities and trends

## Maintaining import/export directories

- Updating computer database of Virginia suppliers
- Operating international buyers' hotline through the Virginia overseas offices to exporters based in Virginia
- Producing forest products export directory

## Providing export marketing assistance

- Handling financial arrangements and terms of payment
- Expediting transportation and shipping documentation
- Assisting with packaging and labeling requirements
- Making service calls to agents, importers and end users





## Cover photos

1. Fall foliage reflects sunlight in hardwood forests which provide multiple benefits. This unusual perspective allows the viewer to appreciate the unique beauty of the forest canopy.

*Right side, top to bottom*

2. Pine and hardwood chips have attracted much attention in the international market place as raw material for pulp and paper, and as fuel fiber.
3. Attractive outdoor living space can be constructed using chemically treated Southern Yellow Pine timbers, boards, dimensional materials and specialty items.
4. Southern Yellow Pine logs mechanically harvested from plantations that have been managed to produce raw material for pulpwood, sawtimber, veneer logs, posts, pilings and other products.
5. Special log handling and export services are available at the Virginia Inland Port facility located near Front Royal.
6. High quality hardwood lumber is packaged and ready to be loaded into a 40' container for export.



## **Virginia Worldwide Trade Offices**

### **Headquarters**

Virginia Department of Agriculture  
and Consumer Services

Office of International Marketing

102 Governor Street, Room 330

Richmond, Virginia 23219 USA

Telephone: 804.371.8991

Fax: 804.225.4434

Web Address:

[www.vdacs.virginia.gov/international/index.html](http://www.vdacs.virginia.gov/international/index.html)

email: [jim.green@vdacs.virginia.gov](mailto:jim.green@vdacs.virginia.gov)

### **Asia/Pacific Headquarters**

Virginia Department of Agriculture  
and Consumer Services

Office of International Marketing

Suite 2118, Jardine House

1 Connaught Place

Hong Kong

Telephone: 852-2-521-1022

Fax: 852-2-810-5495

email: [vdacshk@netvigator.com](mailto:vdacshk@netvigator.com)



*VIRGINIA DEPARTMENT  
OF AGRICULTURE AND  
CONSUMER SERVICES*